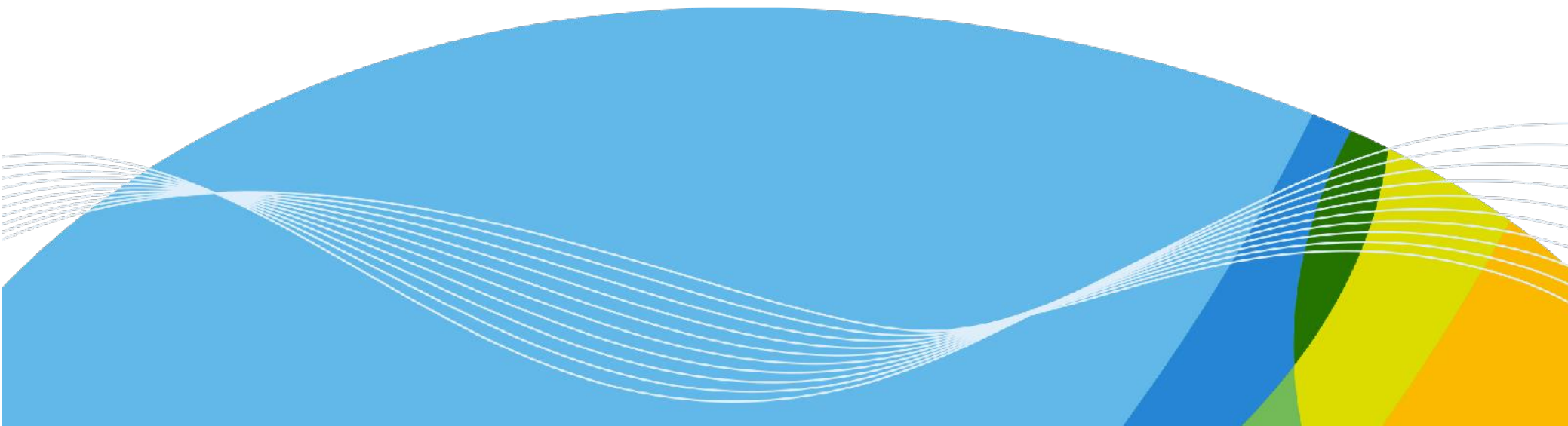




Remote Sensing of Sea Ice

Eero.Rinne@fmi.fi





Synthetic Aperture Radar (SAR)

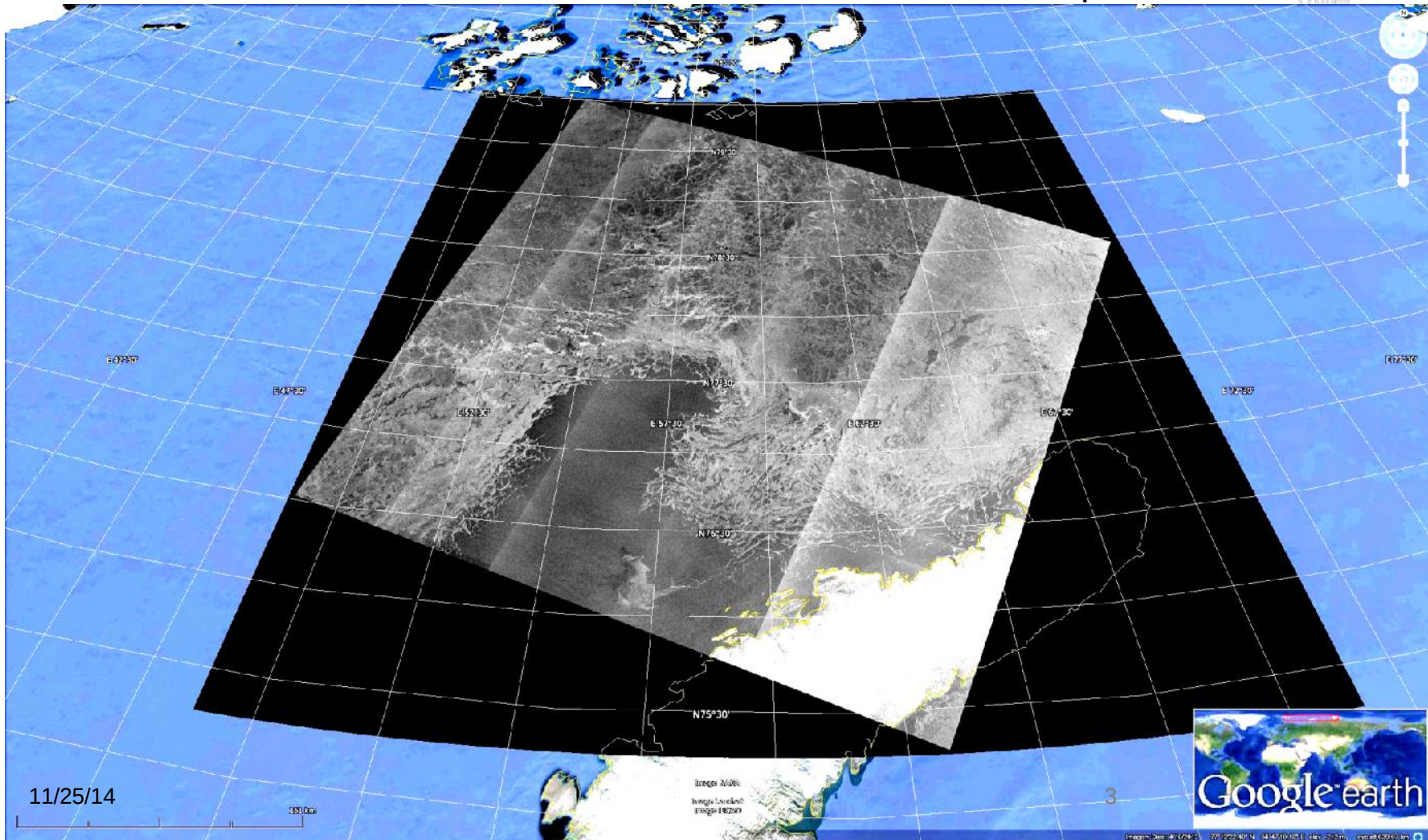
- Backbone of modern ice charting
- Imaging radar





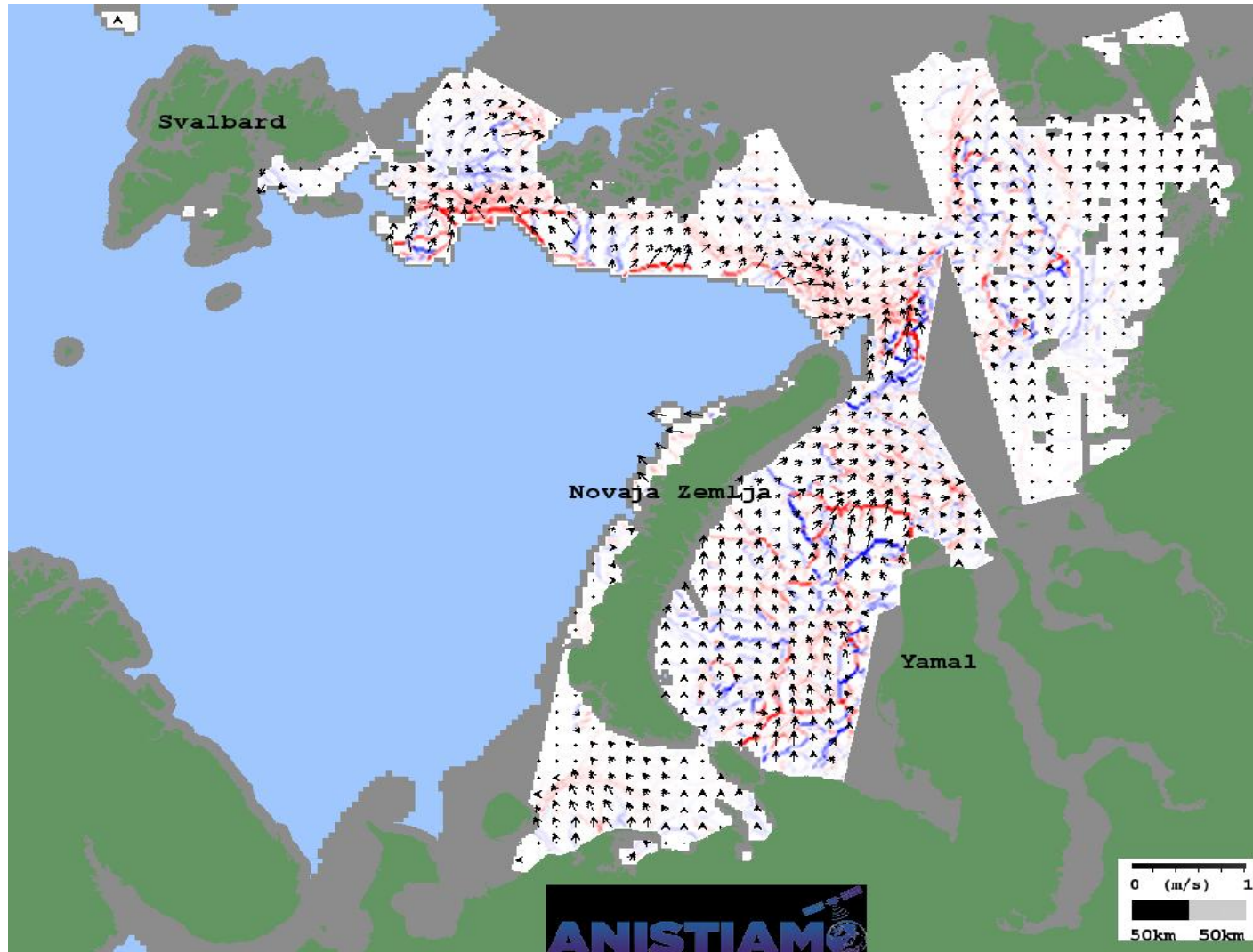
Sentinel 1A frame 24.11.2014

Copernicus data 2014



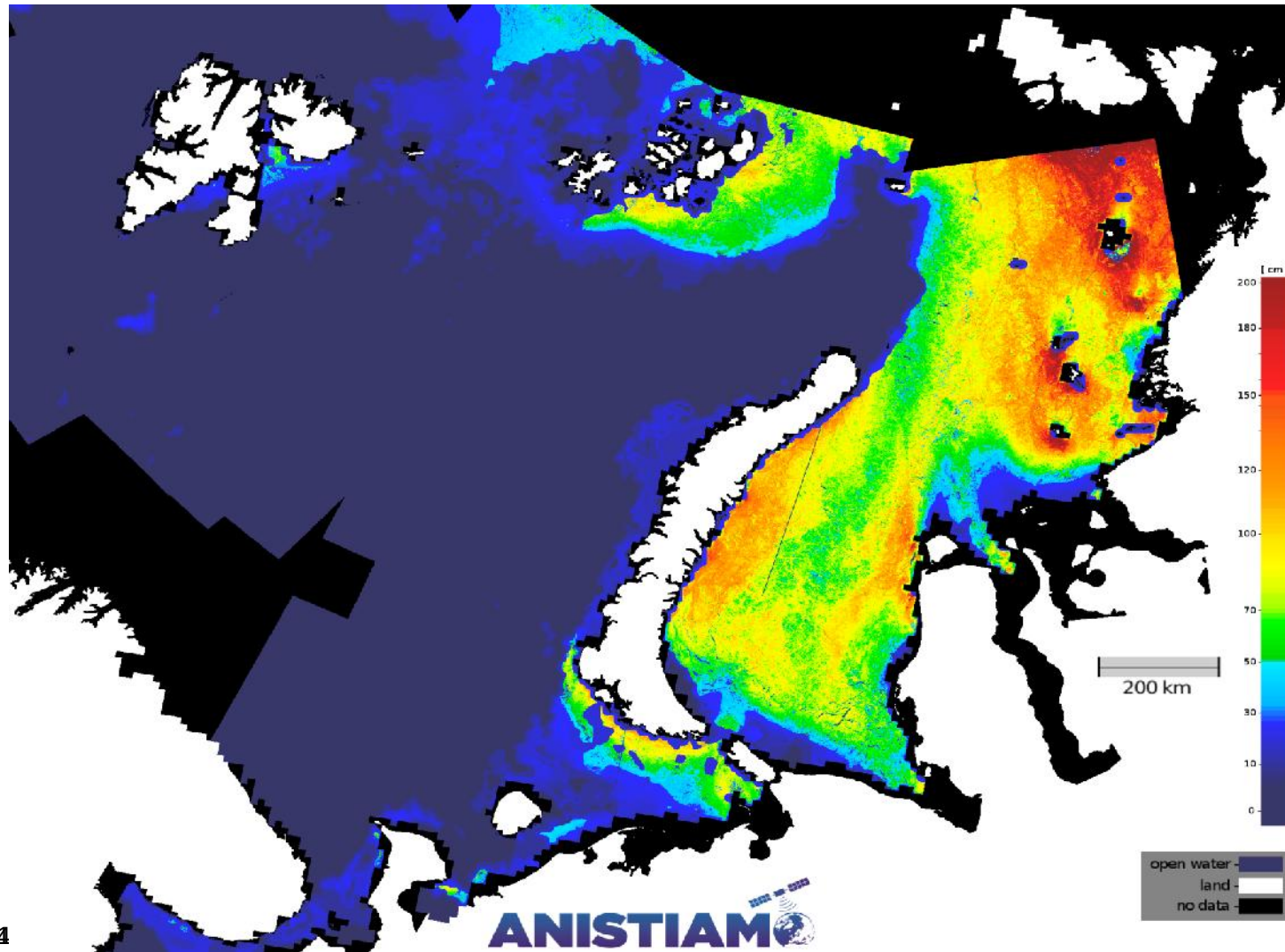


Ice motion and convergence





Thickness





Satellite altimetry

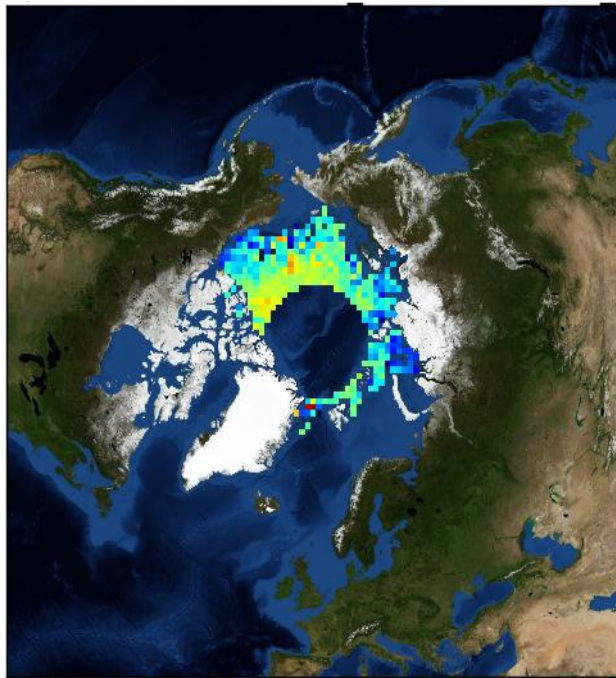
- Non-imaging
- Measures the target surface elevation
- Traditionally a tool for climate research



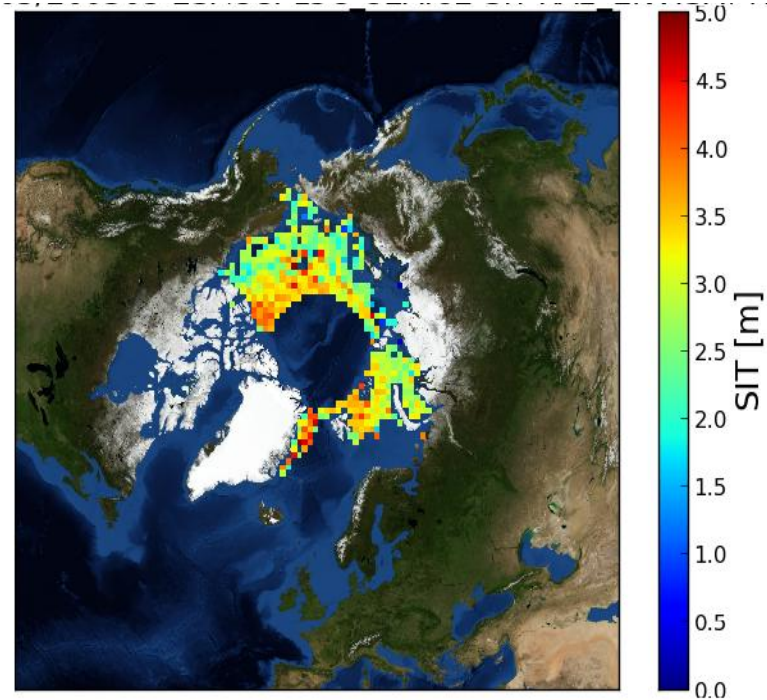


Sea Ice Thickness for climate research

Monthly thickness maps for winters 2002 - present



November 2003

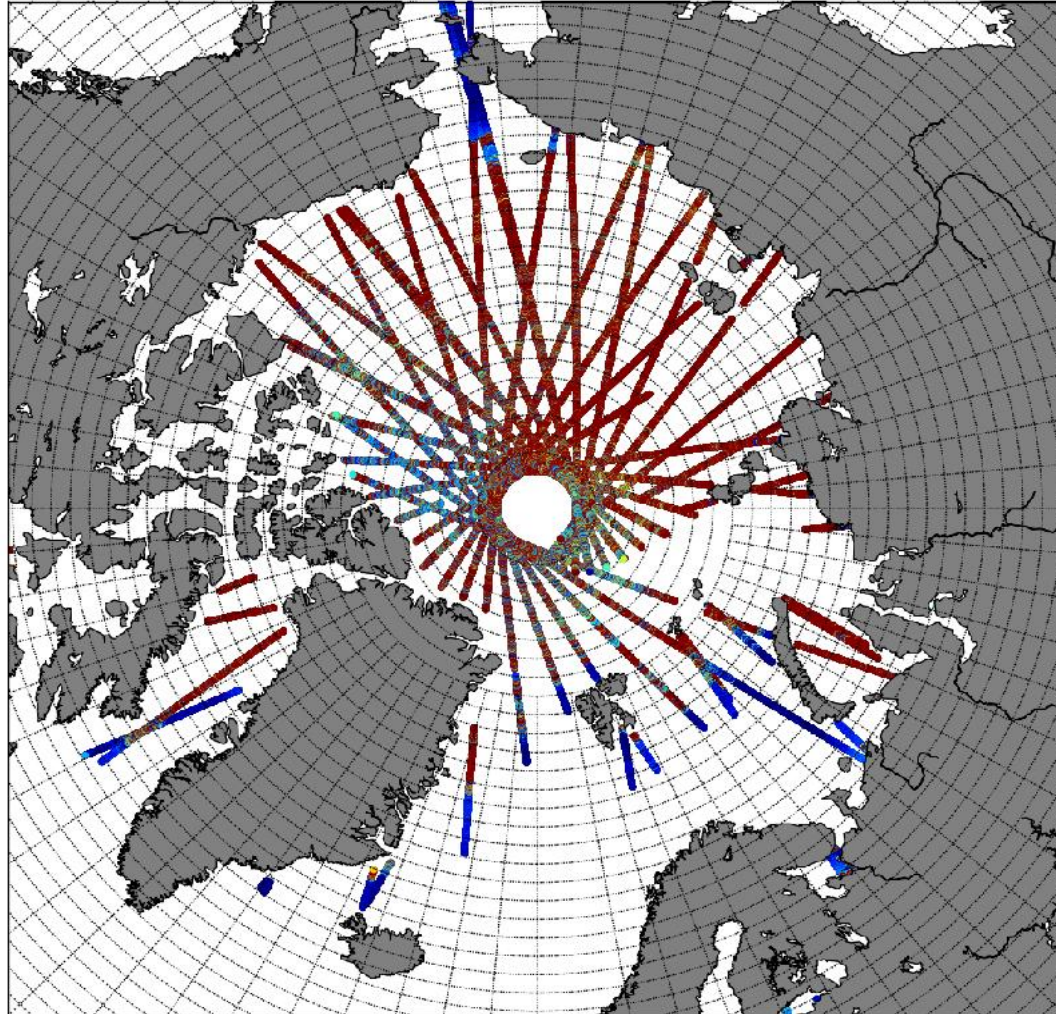


March 2004



Cryosat-2 “FMI Ice Product”

CRYOSAT-2 ICE PRODUCT 2014_12_08_8H_FET ARCTIC
Pulse Peakiness based map
(red = ice, blue = open water)





FINNISH METEOROLOGICAL INSTITUTE

